

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1-12 (canceled).

13. (currently amended) A polymer mixture containing at least one synthetic first polymer P(i) and at least one second polymer P(j),

wherein the first polymer P(i) has a degree of polymerisation  $DP(P(i)) > 500$  and at least one type of crystallisable sequences A having a degree of polymerisation  $DPs(P(i))$  of these sequences  $> 20$ ,

wherein the second polymer P(j) is made up of the same monomer units as the sequences A of P(i) and the degree of polymerisation  $DP(P(j))$  of P(j) is  $20 < DP(P(j)) < 500$ ,

wherein the polymer mixture comprises a molecularly dispersed mixture containing P(i) and P(j) that forms a network under heterocrystallisation,

wherein, under comparable processing conditions of P(i) and of P(i) + P(j), the quotient of the modulus of elasticity  $E(i, j)$  of P(i) + P(j) and the modulus of elasticity  $E(i)$  of P(i),  $E(i, j)/E(i)$  is  $>1.1$  and  $<4$

wherein P(i) or the sequences A of P(i) comprises a polyolefin selected from the group consisting of a polypropylene, polyethylene, VLDPE, LDPE, LLDPE, HDPE, HMWPE, UHMWPE and mixtures thereof, and

wherein P(j) has a polydispersivity  $<30$  and is selected from the group consisting of n-alkanes  $C_nH_{2n+2}$ ; isoalkanes  $C_n$ ; cyclic alkanes  $C_nH_{2n}$ ; polyethylene wax; paraffins and paraffin wax of mineral origin such as

macrocrystalline, intermediate or microcrystalline  
paraffins, brittle, ductile, elastic or plastic  
microcrystalline paraffins; paraffins and paraffin wax of  
synthetic origin; hyper-branched alpha olefins;  
polypropylene wax and mixtures thereof.

14. (previously presented) The polymer mixture according to claim 13, wherein under comparable processing conditions of  $P(i)$  and of  $P(i) + P(j)$  the quotient of the yield stress  $sy(i, j)$  of  $P(i) + P(j)$  and the yield stress  $sy(i)$  of  $P(j)$ ,  $sy(i, j)/sy(i)$  is  $>1.1$  and  $<3.0$ .
15. (previously presented) The polymer mixtures of claim 14, wherein  $E(i, j)$  is  $>1.3$ ,  $sy(i, j)$  is  $> 1.2$  and  $eb(i, j)$  is  $> 1.03$ .
16. (previously presented) The polymer mixtures of claim 14, wherein  $E(i, j)$  is  $>1.5$ ,  $sy(i, j)$  is  $> 1.3$  and  $eb(i, j)$  is  $> 1.05$ .
17. (previously presented) The polymer mixtures of claim 14, wherein  $E(i, j)$  is  $>2.0$ ,  $sy(i, j)$  is  $> 1.5$  and  $eb(i, j)$  is  $> 1.10$ .
18. (previously presented) The polymer mixture according to claim 13, wherein a quotient of the  $MFI(i, j)$  of the mixture of  $P(i) + P(j)$  and the  $MFI(i)$  of  $P(i)$ ,  $MFI(i, j)/MFI(i)$  is  $>1.2$  and  $<500$ .
19. (previously presented) The polymer mixture according to claim 18, wherein the quotient of  $MFI(i, j)$  and  $MFI(i)$  is  $>1.5$ .

20. (previously presented) The polymer mixture according to claim 18, wherein the quotient of  $\text{MFI}(i, j)$  and  $\text{MFI}(i)$  is  $>2.0$ .
21. (previously presented) The polymer mixture according to claim 18, wherein the quotient of  $\text{MFI}(i, j)$  and  $\text{MFI}(i)$  is  $>3.0$ .
22. (previously presented) The polymer mixture according to claim 13, wherein under comparable processing conditions of  $P(i)$  and of  $P(i) + P(j)$ , the quotient of the crystallinity  $K(i, j)$  of  $P(i) + P(j)$  and the crystallinity  $K(i)$  of  $P(i)$ ,  $K(i, j)/K(i)$  is  $>1.03$  and  $<3$ .
23. (previously presented) The polymer mixture according to claim 22, wherein the quotient of  $K(i, j)$  and  $K(i)$  is  $>1.05$ .
24. (previously presented) The polymer mixture according to claim 22, wherein the quotient of  $K(i, j)$  and  $K(i)$  is  $>1.1$ .
25. (previously presented) The polymer mixture according to claim 22, wherein the quotient of  $K(i, j)$  and  $K(i)$  is  $>1.2$ .
26. (previously presented) The polymer mixture according to claim 13, wherein the fraction  $A(j)$  of  $P(j)$  relative to  $P(i) + P(j)$  in wt.% is in the range  $1 < A(j) < 90$ .
27. (previously presented) The polymer mixture according to claim 13, wherein the fraction  $A(j)$  of  $P(j)$  relative to  $P(i) + P(j)$  in wt.% is in the range  $2 < A(j) < 85$ .

28. (previously presented) The polymer mixture according to claim 13, wherein the fraction  $A(j)$  of  $P(j)$  relative to  $P(i) + P(j)$  in wt.% is in the range  $3 < A(j) < 80$ .
29. (previously presented) The polymer mixture according to claim 13, wherein the fraction  $A(j)$  of  $P(j)$  relative to  $P(i) + P(j)$  in wt.% is in the range  $5 < A(j) < 75$ .
30. (previously presented) The polymer mixture according to claim 13, wherein  $P(i)$  has a degree of branching  $< 3 \times 10^{-2}$ , and  $P(j)$  has a degree of branching  $< 5 \times 10^{-2}$ .
31. (previously presented) The polymer mixture according to claim 13, wherein  $P(i)$  has a degree of branching  $< 1 \times 10^{-2}$ , and  $P(j)$  has a degree of branching  $< 1 \times 10^{-3}$ .
32. (previously presented) The polymer mixture according to claim 13, wherein  $P(i)$  has a degree of branching  $< 5 \times 10^{-3}$ , and  $P(j)$  has a degree of branching  $< 1 \times 10^{-3}$ .
33. (previously presented) The polymer mixture according to claim 13, wherein  $P(i)$  has a degree of branching  $< 1 \times 10^{-3}$ , and  $P(j)$  has a degree of branching  $< 1 \times 10^{-4}$ .
34. (cancelled)
35. (previously presented) The polymer mixture according to claim 13, wherein  $P(j)$  has a polydispersivity  $< 20$ .
36. (previously presented) The polymer mixture according to claim 13, wherein  $P(j)$  has a polydispersivity  $< 10$ .

37. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a polydispersivity <5.
38. (previously presented) The polymer mixture according to claim 13, wherein P(i) and/or P(j) have long-chain branchings which have a degree of polymerisation >20.
39. (previously presented) The polymer mixture according to claim 13, wherein P(i) and/or P(j) have long-chain branchings which have a degree of polymerisation >30.
40. (previously presented) The polymer mixture according to claim 13, wherein P(i) and/or P(j) have long-chain branchings which have a degree of polymerisation >40.
41. (previously presented) The polymer mixture according to claim 13, wherein P(i) and/or P(j) have long-chain branchings which have a degree of polymerisation >50.
42. (cancelled)
43. (cancelled)
44. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a density in g/cm<sup>3</sup> of >0.9, and a melting or dropping point in °C of >80.
45. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a density in g/cm<sup>3</sup> of >0.925, and a melting or dropping point in °C of >100.
46. (previously presented) The polymer mixture according to

- claim 13, wherein P(j) has a density in g/cm<sup>3</sup> of >0.950, and a melting or dropping point in °C of >110.
47. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a density in g/cm<sup>3</sup> of >0.970, and a melting or dropping point in °C of >120.
48. (previously presented) The polymer mixture according to claim 13, wherein P(j) has a density in g/cm<sup>3</sup> of >0.980, and a melting or dropping point in °C of >125.
49. (previously presented) The polymer mixture according to claim 13, wherein the polymer mixture in the form of a thermoplastic melt is prepared by means of a dispersively and distributively acting mixing system, especially by means of a double-screw extruder or a single-screw extruder with mixing section or a Buss-Ko kneader and optionally after preparation is present in the form of granules, pellets, powder, macro- or micro-fibres, as film, casting, continuous casting, extrudate, thermo-shaped part and the like.
50. (previously presented) The polymer mixture according to claim 13, further comprising a swelling agent for at least one of P(i) and P(j).
51. (previously presented) The polymer mixture of claim 14, wherein, if there is a fraction A(j) of P(j) relative to P(i) + P(i) in wt.% within the range  $1 < A(j) < 15$ , the quotient of the breaking elongation eb(i, j) of P(i) + P(j) and the breaking elongation eb(i) of P(i),  $eb(i, j)/eb(i)$  is >1.01 and <1.5.